

ORGANIC N-CHANNEL SEMICONDUCTOR DEVICE OF N,N' 3,4,9,10 PERYLENE TETRACARBOXYLIC DIIMIDE

ABSTRACT

The invention provides a device comprising an improved n-channel semiconducting film. This film consists of a perylene tetracarboxylic acid diimide compound and was deposited onto substrates by vacuum sublimation. Thin film transistor devices comprising such films as the semiconducting channel exhibit a field effect electron mobility greater than $0.01 \text{ cm}^2/\text{Vs}$ and an on/off ratio of 10000 and higher.